

that some part of the vehicle 1 has shifted into a state for performing a so-called special travel. Therefore, the detection unit in this embodiment of the present disclosure can have an appropriate configuration as necessary. For example, other than the sensor that detects the steering angle to which the wheel 3 is steered by the steering device 4, the selection switch 28 as the manipulation unit, and the touch sensor provided in the wheelhouse 22, the detection unit may include a detector that processes an image of the wheel 3 and outputs a signal showing the steering state of the wheel 3. The indication unit in this embodiment of the present disclosure is not limited to the configuration that uses LEDs, such as the blinkers 29. The indication unit may be an image display (i.e., the display unit in this embodiment of the present disclosure), such as an overhead display, that displays images or texts on a liquid crystal panel or a glass provided on a surface of the vehicle body 2. Moreover, a configuration in which voice is used for indication other than these optical means, or a configuration combining optical means and acoustic means may be adopted.

**[0055]** How to steer the wheels 3 to cause the vehicle 1 to travel laterally or rotate on the spot will be described here. The vehicle 1 has the configuration in which each wheel 3 has two axes as rotational axes, and when steered, each wheel 3 is steered around a central portion of the wheel 3. Thus, the wheels 3 can be rotated in both the rightward and leftward directions as the steering directions. To cause the vehicle 1 to rotate on the spot, as described above, two wheels located on the same diagonal line are steered to the same angle rightward or leftward. For example, the right front wheel 3FR and the left rear wheel 3RL are steered to 45 degrees leftward, while the left front wheel 3FL and the right rear wheel 3RR are steered to 45 degrees rightward. Thus, the wheels 3 need to be steered only to a small angle, and therefore can be quickly set to a state that allows the vehicle 1 to rotate on the spot. Whether the wheels 3 have been thus brought into a state that allows for an on-the-spot rotation, in other words, whether conditions for starting to drive the wheels 3 to make an on-the-spot rotation have been met, can be determined by detecting that the steering angle of each wheel 3 reaches a predetermined angle (45 degrees in the above example).

**[0056]** On the other hand, to cause the vehicle 1 to travel laterally, each wheel 3 is steered to 90 degrees. In this case, all the wheels 3 may be rotated rightward or leftward as the steering direction, but it is preferable that the wheels 3 located next to each other in the front-rear direction or a right-left direction be steered in opposite directions. When the wheel 3 is steered, a reaction force acts on the vehicle body 2. Steering the wheels 3 located next to each other in opposite directions can cancel out the reaction forces of the wheels 3 and thereby reduce shaking of the vehicle body 2.

**[0057]** In both cases of an on-the-spot rotation and a lateral travel, whether steering of the wheels 3 has been completed, i.e., whether conditions for starting to drive the wheels 3 have been met, can be determined by detecting the steering angles of the wheels 3 by a predetermined angle sensor, or by detecting that the wheels 3 have protruded from the wheelhouses 22 with a touch sensor or by image processing. Steering of the wheels 3 for a special travel is performed with the vehicle 1 temporarily stopped.

What is claimed is:

1. A vehicle comprising:

a plurality of wheels that is mounted to a vehicle body and grounded;

a steering device configured to steer the wheels to such a steering angle that the vehicle travels straight in a front-rear direction of the vehicle, and additionally to steer the wheels at least either to such a first steering angle that the vehicle travels straight in a direction intersecting the front-rear direction or to such a second steering angle that the vehicle rotates around a vertical axis passing through a central portion of the vehicle body; and

a direction indication system configured to, when the steering device steers the wheels to either the first steering angle or the second steering angle, indicate toward an outside of the vehicle body that the vehicle is going to travel straight in the direction intersecting the front-rear direction or that the vehicle is going to rotate around the vertical axis passing through the central portion of the vehicle body.

2. The vehicle according to claim 1, wherein the direction indication system includes a detection unit that detects that the steering device steers the wheels to the first steering angle or the second steering angle, and an indication unit that optically or acoustically indicates to those around the vehicle body that the vehicle is going to travel straight in the direction intersecting the front-rear direction or that the vehicle is going to rotate around the vertical axis passing through the central portion of the vehicle body.

3. The vehicle according to claim 2, wherein:

the steering device is configured to rotate each of the wheels around a rotational central axis to the first steering angle or the second steering angle; and

the detection unit is configured to detect that the wheels are steered to the first steering angle or the second steering angle, based on rotation angles of the wheels rotated around the rotational central axis.

4. The vehicle according to claim 2, further comprising a manipulation unit that is manipulated by a driver to output a signal ordering the steering device to steer the wheels to the first steering angle or the second steering angle, wherein the detection unit is configured to detect that the steering device steers the wheels to the first steering angle or the second steering angle, based on the manipulation unit having been manipulated and output the signal.

5. The vehicle according to claim 2, further comprising a wheelhouse that covers at least an upper side of the wheel, wherein:

the wheelhouse is configured such that when the steering device steers the wheel to the first steering angle or the second steering angle, the wheel partially protrudes from the wheelhouse to the outside of the vehicle body; and

the detection unit is configured to detect that the steering device steers the wheel to the first steering angle or the second steering angle, based on the wheel having partially protruded from the wheelhouse to the outside of the vehicle body.

6. The vehicle according to claim 2, wherein the indication unit includes a light emitter that emits visible light to the wheels when the detection unit has detected that the steering device steers the wheels to the first steering angle or the second steering angle.